## Claims

1. A polyester diol containing at least one diol selected from the group consisting of 2-n-butyl-2-ethyl-1,3-propanediol, 2,2-diethyl-1,3-propanediol and 2,4-diethyl-1,5-pentanediol, ϵ-caprolactone, and adipic acid as constructing components.

2. A polyester diol as claimed in claim 1, wherein a number average molecular weight ranges in 500-5,000.

3. A polyester diol as claimed in claim 1 or 2, wherein (the content of a polyester constructing unit)/(the content of constructing unit of ϵ-caprolactone) is 5/95-80/20 (weight ratio), and said polyester is composed of at least one diol selected from the group consisting of 2-n-butyl-2-ethyl-1,3-propanediol, 2,2-diethyl-1,3-propanediol and 2,4-diethyl-1,5-pentanediol, and adipic acid.

4. A polyurethane obtained from a polyester diol as claimed in any one of claims 1-3 and an organic diisocyanate.

5. A spandex filament which comprises the polyurethane as claimed in claim 4.

6. A polyester diol containing a branched aliphatic diol, ϵ-caprolactone, and an aliphatic dicarboxylic acid having a carbon number of 10-12 as constructing components.

7. A polyester diol as claimed in claim 6, wherein a number average molecular weight ranges in 500-5,000.

8. A polyester diol as claimed in claim 6 or 7, wherein (the content of a polyester constructing unit composed of a branched diol and an aliphatic dicarboxylic acid having a carbon number of 10-12)/(the content of constructing unit of ϵ-caprolactone) is 5/95-80/20 (weight ratio).

9. A polyurethane obtained from a polyester diol as claimed in any one of claims 6-8 and an organic diisocyanate.

10. A spandex filament which comprises the polyurethane as claimed in claim 9.

11. A polyurethane obtained by allowing to react a polyester diol containing 2,4-diethyl-1,5-pentanediol as a constructing component with an organic diisocyanate.

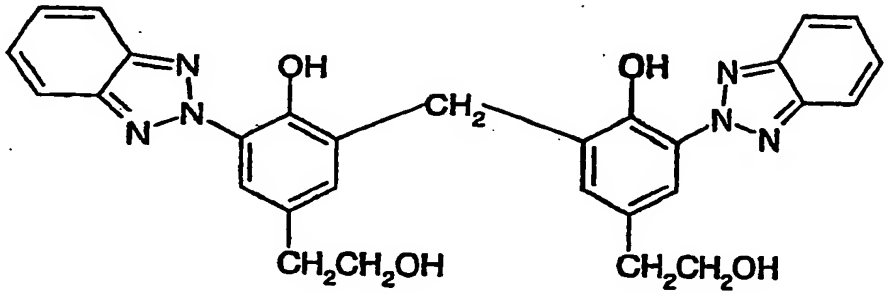
12. A polyurethane as claimed in claim 11, wherein a number average molecular weight in said polyester diol ranges in 500-5,000.

13. A spandex filament which comprises the polyurethane as claimed in claim 11 or 12.

14. A polyurethane obtained from a polyether polyol (X) containing a polyol component (A) composed of a polyol (A1) having an ultraviolet ray-absorbable group or a lactone-modified polyol (A2) therefrom and other polyol components (A3), adipic acid (B), and an organic diisocyanate (Y).

15. A polyurethane as claimed in claim 14, wherein the polyol

(A1) having an ultraviolet ray-absorbable group is a compound represented by formula (1).



(1)

16. A polyurethane as claimed in claim 14 or 15, wherein said lactone is ϵ-caprolactone.

17. A polyurethane as claimed in any one of claims 14-16, wherein a number average molecular weight of said polyester polyol ranges in 500-5,000.

18. A polyurethane as claimed in any one of claims 14-17, wherein said (constructing unit content of the polyester composed of the polyol compound (A) and adipic acid)/(the content of constructing unit of a lactone) is 5/95-80/20 (weight ratio).

19. A polyurethane as claimed in any one of claims 14-18, wherein a molar ratio of constructing unit content in said polyol {(A1)+(A2)}/{(A1)+(A2)+(A3)} is 0.01-10.

20. A spandex filament which comprises a polyurethane as claimed in any one of claims 14-19.

21. A dialkylamino group-contained acrylic-based copolymer formed by an essential copolymer component which includes a dialkylaminoethyl(meth)acrylate represented by a general formula

(1) described below and a reactive monomer represented by a general formula (2) described below.

$$CH_2=CRCOOCH_2CH_2NR^0R^0 \qquad (1)$$

(in the formula, R is a hydrogen or a methyl group, $R^0$ is an alkyl group having a carbon number of 1-4)

$$CH_2=CRCOOCH_2CH_2O[-C(=O)(CR^1R^2)^{2x}-O-]_n-H \qquad (2)$$

(in the formula, R is a hydrogen or a methyl group, x pieces of $R^1$ and $R^2$ are independently a hydrogen or an alkyl group having a carbon number of 1-12, respectively, and n pieces of ring-opened lactone chains may be identical or different from each other. "x" is an integer of 4-7, and an average value of "n" is 1-5)

22. A polyurethane composition characterized by containing a dialkylamino group-contained acrylic-based copolymer as claimed in claim 21.

23. A spandex composition as claimed in claim 22, wherein the content of said dialkylamino group-contained acrylic-based copolymer is 0.5-10% by weight.

24. A spandex composition containing a dialkylamino group-contained acrylic-based copolymer as claimed in claim 21.

25. A spandex composition as claimed in claim 24, wherein the content of said dialkylamino group-contained copolymer is 0.5-10% by weight.

26. A polyester diol containing at least an aliphatic

dicarboxylic acid having a carbon number of 9-12, an aliphatic diol, and ϵ-caprolactone as constructing component units.

27. A polyester diol as claimed in claim 26, wherein a number average molecular weight in said polyester polyol ranges in 500-5,000.

28. A polyester diol as claimed in claim 26 or 27, wherein said (constructing unit content of the polyester composed of an aliphatic diol and an aliphatic dicarboxylic acid having a carbon number of 9-12)/(the content of constructing unit of ϵ-caprolactone) is 5/95-80/20 (weight ratio).

29. A polyurethane obtained from a polyester diol as claimed in claims 26-28 and an organic diisocyanate.

30. A polyurethane as claimed in claim 29 which is a polyurethane for an artificial leather.